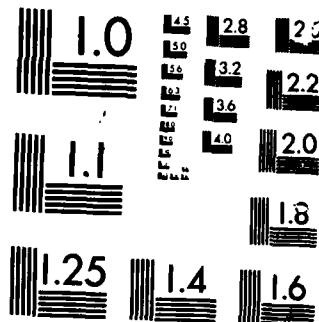


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**SPONSOR: SCIENTIFIC OFFICER
CHIEF OF NAVAL OPERATIONS
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Missions of the U.S. Navy 2000-2010

The missions which the United States Navy will be expected to perform in the first decade of the Twenty-First Century will be determined, in large part, by the nature of the geopolitical situations expected to be in evidence in the period 2000-2010.

Nature of the Geopolitical Environment 2000-2010: A Summary

The first assumption is that the international system will evolve over the next twenty-five years in the broad directions established during the previous forty years (Evolving Alliance Structures, p. 2). Major excursions from the present international system are possible but unlikely during the period examined in this study. One major aspect of this system to date has been the extraordinary stability of the superpower balance of deterrence, which has been imposed by the mutual possession of nuclear weapons. Nonetheless, this deterrence of war between the superpowers has not been carried over to interstate relationships where mutual nuclear deterrence is not in existence. Indeed, the theoretical predictions that a relatively stable balance of nuclear deterrence would make the world safer for limited conventional conflicts has been proved correct (Evolving Alliance Structures, p. 5). Both the United States and the Soviet Union have felt free to engage in conventional conflicts around the world during this period, so long as they have been able to avoid direct confrontation with each other in the

course of such involvement. This situation is expected to continue during the period 2000-2010.

In terms of potential threats to U.S. global interests, the Soviet Union will continue to pose the major military and political threat throughout the period in question (Geopolitics, Strategy and U.S. Interests, p. 100). Under all expected circumstances, the Soviet Union will retain a substantial military structure (U.S. Foreign Policy: Atlantic And Pacific Orientations, p. 10) -- one that will continue to be capable of intervening in conflicts deemed important to the Soviet state. Accordingly, the United States will find it necessary to continue its policy of attempting to contain Soviet geopolitical advances.

The Soviet Union is expected to continue placing particular attention on the evolving situation in Europe (U.S. Foreign Policy: Atlantic And Orientations, p. 32). Further Soviet westward expansion in Europe, however, is likely to remain contained by the combination of U.S. plus British and French nuclear forces and NATO conventional forces (Evolving Alliance Structures, p. 55). Combined, the two types of forces create a balance of deterrence and defense capabilities sufficient to deter the Soviet Union under all but the most extreme circumstances, such as a revolutionary domestic change in Eastern or Western Europe.

Despite its continuing strong interest in Europe, the Soviet Union, which sees itself as an Asian as well as a European power (U.S. Foreign Policy: Atlantic And Pacific

Orientations, p. 33), will continue to demonstrate considerable interest in establishing a perimeter along the Indian Ocean littoral and in the western Pacific (U.S. Foreign Policy: Atlantic and Pacific Orientation, p. 34). This pattern of opportunism in Europe and long-term development of a security structure in Asia will remain the pattern in 2010. By this date, moreover, the determinants of Soviet strategic orientation may well come from Asia, particularly if China retains her anti-Soviet stance (U.S. Foreign Policy: Atlantic and Pacific Orientation, pp. 36-37).

In regard to non-Soviet threats to U.S. interests worldwide, it is likely that these will arise, from region to region, as a result of continuing political instability in the Third World. In the 2000-2010 period, such instability, with its attendant interstate strife, is likely to remain a prominent aspect of the international system (Geopolitics, Strategy And U.S. Interests, pp. 129-130, 143, 147-148, 154, 156-157). United States' attempts to intervene in such conflicts in the future may be hampered by the involvement of new regional military powers whose armaments, while relatively small in total quantities, are sophisticated in operational performance (Evolving Alliance Structures, pp. 6, 10-11). Because of the unstable nature of Third World governments and the more limited extent of U.S. interests there, U.S. alliances in the Third World (aside from Latin America), unlike those with NATO-Europe and the major powers in Asia, will be transitory in nature, oriented toward rapid,

relatively short-term gains in influence (Evolving Alliance Structures, pp. 102, 113-114), possibly at the expense of the Soviet Union. Everything considered, however, the situation in the Third World in the period 2000-2010 is likely to be highly volatile, as there will be a continuing slide toward anarchical conditions in many of the regions of the world.

There is also the situation with regard to the United States' major alliance partners to be discussed. In the case of the NATO Alliance, although several alternative futures are possible, the most likely one is that the Alliance will continue unchanged in its essentials, although modified in detail (Evolving Alliance Structures, p. 24). The United states will continue to provide its nuclear extended deterrence guarantee to Western Europe. And she will continue to station significant conventional forces on European soil. There may be a reduction in the number of these troops compared to present levels, but the reduction should not be a drastic one. The range in downward adjustments in U.S. forces in Europe will remain limited by the severity in the size of the Soviet threat, by expected constraints on the ability of the NATO European countries to provide substituting forces and by the continuing role of these U.S. forces in deterrence and defense on the Continent (Evolving Alliance Structures, p. 25).

In regard to its alliance with Japan, the United States may see an increased emphasis on the part of the Japanese to shoulder greater burdens for their own defense. If this does

occur, it will have come about as the result of a laborious effort on the part of Japan's leadership, since to date the post-war anti-militarist emphasis has remained a strong part of Japan's political environment. The extent of Japan's increased defense emphasis is difficult to predict. Given Japan's economic might and security requirements, particularly in relation to SLOC protection, it could move her in the direction of becoming a major conventional military power (Evolving Alliance Structures, p. 85). On the other hand, the United States must also be prepared for a Japanese defense stance which represents only a modest improvement over the current situation (U.S. Foreign Policy: Atlantic and Pacific Orientations, p. 51).

In the case of China, the U.S. interest over the next twenty-five years is likely to lie in building up China's economic and technical base and assisting in the modernization of her armed forces (Evolving Alliance Structures, p. 97). In the years from 1985 to 2010, China seems likely to emerge as a major power, despite the enormousness of the economic and political problems she will have to overcome. Her long-term interests lie in maintaining her political independence and territorial integrity, acquiring assets which assist her process of economic growth, returning Hong Kong and Taiwan to Chinese control and establishing herself as a regional and even global great power (Evolving Alliance Structures, p. 91). On balance, it appears that China will continue to see benefit in maintaining her friendly ties with the United States.

However, China continues to seek to control rather than be controlled by the superpower relationship (U.S. Foreign Policy: Atlantic and Pacific Orientation, p. 49).

Since United States national interests (seen at the highest level of generality) will remain substantially, if not entirely, unchanged during the next quarter century, U.S. national objectives during the period 2000-2010 will continue to include:

- 1) deterrence of a direct attack on the United States and her allies by the Soviet Union;
- 2) failing that, fighting and concluding such a conflict at the lowest level of violence consistent with U.S. national interests;
- 3) containing the expansion of Soviet power into geographic areas not now under Soviet or proxy control;
- 4) supporting U.S. allies and friendly countries in the face of external threats to their security;
- 5) defending existing U.S. sea and air lines of communication against attempts to deny access; and
- 6) upholding U.S. access to raw materials and markets.

Such objectives will require the maintenance of substantial military forces and their employment for various purposes and in varying degrees, depending upon the nature of the threat and the level of violence involved.

The Missions of the U.S. Navy

Since the world geopolitical environment in 2000-2010 is expected to be very similar in most of its large-scale aspects to that found in 1985 and since U.S. national objectives are unlikely to be altered substantially from those now guiding policy, the basic missions of the Navy will not change to any appreciable degree in the years from 1985 to 2010. Because of the unique combination of its flexibility, mobility and ability to remain forward deployed but "beyond the horizon," the Navy, since 1945, has been the Service most often called upon in times of crisis to maintain a presence, demonstrate U.S. national resolve or project power ashore in troubled regions of the globe. The emerging geopolitical situation in the Third World is not likely to decrease the need for this type of military demonstration. Indeed, it is likely to have the opposite effect.

Thus, the Navy in 2010 will have the same five generic missions which it has today -- naval presence, commerce protection, power projection, strategic deterrence and sea control. As discussed in the Task Three paper, these are all missions which have evolved over a period of some years (in the case of all but strategic deterrence, a period of many decades or even centuries). That they have remained viable missions during a span of years which has seen a series of major technological changes in the design and construction, armament, and types of naval vessels afloat (to name only a

few categories of change), says something important about the durability of maritime power as a factor in international power politics.

The fact that the Navy's generic missions will remain the same in 2010, however, should not be taken to mean that the way in which these missions will be performed twenty-five years hence will also stay the same. This is where the factor of technological change comes most fully into play. The missions will stay the same but in order to accomplish them successfully the U.S. Navy, in all likelihood, will have to adopt new approaches and tactics, ones designed around new platforms, weapons and sensors and yet cognizant of the technological advances made to the weapons and systems of potential adversaries.

Clearly, this study was not designed to be a comprehensive look at potential naval technologies in the 2000-2010 period, and so the following few observations are not meant to convey more than a few fairly cursory ideas about the possible nature of changes in mission tactics wrought by emerging technologies.

Cover and Deception Tactics

One of the most important factors aiding in the Navy's accomplishment of required wartime missions in the first decade of the Twenty-First Century is likely to be its large-scale use of cover and deception. Except in cases where Navy task forces are under continuous trailing by enemy

"tattletales," a situation which the Sixth Fleet encounters frequently in the Mediterranean, enemy observation of U.S. naval vessels prior to an engagement is likely to be through acoustic or electronic means rather than direct visual observation. Enemy use of these less precise means of target acquisition furnish a naval task force commander with the opportunity to employ deceptive tactics to confuse the enemy commander as to the size of his force, its composition, its apparent position and bearing and the location of its high-value ships.

Cover and deception tactics are pertinent today, given Soviet reconnaissance assets, including maritime reconnaissance satellites. They are likely to become vital by the period 2000-2010, given expected improvements in the long-range sensors that will be available to both sides -- allowing almost continuous, all-weather, highly-discriminate tracking of targets on the surface of the ocean.

The present "defense in depth" concept for carrier task forces utilizes a combination of fighter aircraft, surface-to-air missiles and point defense systems to defend a carrier task group from air attack. It is a logical outgrowth of tactical lessons in AAW derived from the experiences of American carrier task forces operating against Japan in the final years of the Second World War, when the Japanese began relying on Kamikaze attacks to attrit the American carrier forces. It progressed in stages from the 4-VICTOR task group formation of 1949-50, to the introduction of sea-based

surface-to-air missiles in the 1956-1961 period (TALOS, TERRIER, TARTAR), and finally to the present AEGIS system (SPY-1 radar and STANDARD SM-2 missile). Although the technology for defending it has evolved substantially since 1945, the carrier formation itself has remained much the same as it was then. The aircraft carrier (or carriers) in the task group occupies a position in the center of the formation, surrounded by the ships of its screen. The AEGIS cruiser operates close to the carrier, using its high-powered radar to search for inbound enemy aircraft or cruise missiles. In such a formation, however, it is relatively easy for enemy sensors to pick out the high-value targets from amid the clutter of ships detected, while the high-powered radiations emanating from the formation act as a beacon for space and air surveillance vehicles to track the exact position of the carrier.

Given the massive inventory of advanced, possibly even "near-zero CEP," cruise missiles expected to be available to the Soviet Union in the 2000-2010 timeframe and the expected continuing Soviet interest in the "battle of the first salvo," the systematic use of cover and deception tactics by Navy carrier battle groups and surface action groups would seem to promise a much reduced threat of substantial early ship losses in the initial engagements of a war with the Soviet Union. The employment of deceptive formations, whereby the spread-out appearance of the formation and seemingly random maneuvering of individual ships would mask the presence of a large task

force, and the strict employment of electromagnetic radiation control (EMCON) conditions would help to ensure maximum difficulty of Soviet targeting on the formation during its approach to the objective area.

Under such tactics there would still be a significant need for ship-based active radar for warning and battle management, however, it would be employed only following enemy detection of the formation, not prior to it, and would not be used continuously even after initial contact had been made with the enemy. Use of such tactics would ensure that instead of presenting an easy, expected picture to Soviet defenders, U.S. battle group formations would be confusing Soviet defenders as long as possible both as to their very existence and (once recognized) as to their likely objectives.

Clearly, successful employment of cover and deception tactics will require not only tactical but technological changes over the currently operating (and presently projected) forces. Ways will have to be found to operate jet aircraft from the existing carriers using a minimum of carrier electronic emissions. Current fairly broad-beam radars used for tracking and fire-control will have to be replaced with narrow-beam units, capable of rapid warm-up and recovery during frequent quick on-quick-off operating conditions. Increased speed for surface ships may also have to be factored into the equation, since the ability of elements of a formation to establish themselves rapidly on a new threat axis would hinder substantially the enemy's ability to defend

against the formation's attacks. Increased efforts will also have to be made in providing the individual ships of the formation with a good self-defense capability against advanced cruise missiles.

Coping with Small but Sophisticated Navies

In the past few years, major navies have come to recognize more and more that the costs of engaging even small naval powers have increased substantially. With the widespread sale of modern weapons by both the East and West to countries of second-, third- and even lower rank, the military forces of these countries have become equipped with combat systems of a sophistication far above what was once their lot. As demonstrated by the effectiveness of its handful of French-supplied EXOCET air-to-surface missiles during the Falklands War, Argentina's power to challenge the much superior British Navy's working control of the South Atlantic in the waters around the Falklands proved far more substantial than the mere size of its maritime forces would have dictated. The cost to Britain in combat ships lost to Argentine attacks might well have proven prohibitive if Argentine squadrons had been better supplied with Super Etendards and EXOCETS.

It is not expected that this current trend of supplying sophisticated anti-ship weapons to Second and Third World countries will diminish in the coming two decades. Armaments manufacturers in Western Europe and the United States exist to sell weapons, and, given continuing trade balance questions,

the governments of the countries involved are unlikely to curtail the sale of such weapons to friendly (or at least not hostile) regimes. While on the Soviet Bloc side, the sale or transfer of arms to client states and revolutionary parties is seen as a positive good for the furtherance of Socialist aims.

Thus, the U.S. Navy in the 2000-2010 period is highly likely to be operating in Third World regions of the world where the cost of the presence and power projection missions will have risen substantially over that now experienced. This major change in the threat level will have to be met by changes in tactics which serve to reduce the chances of the fleet sustaining serious personnel, ship and aircraft losses due to attacks from Third World navies. This will also place increased emphasis on the efficacy of the individual ship's countermeasures suite. The ship will have to be capable of effectively countering the threat posed by a multiple launching of anti-ship cruise missiles under conditions of near-zero warning and minimal engagement time.

It is possible that in the next several decades, the existence of sophisticated naval weapons in a Third World region will cause U.S. political leaders to reassess the requirements for a particular naval presence mission in that region. To the extent that the Navy has coped with this emerging threat, it will be able to reassure U.S. policymakers that its forces can remain in a disputed area without suffering substantial unexpected losses.

Functioning in an Era of Constrained Assets

Even as the geopolitical environment in 2000-2010 is not expected to change in ways substantially different from those at present, so too the size of the U.S. Navy is not expected to increase to any great extent above what is now planned. Thus, the resulting situation in the first decade of the Twenty-First Century is likely to be for the Navy what it was in the late 1970s -- too many geographic responsibilities and too few ships to carry them out.

There are only so many ways one can handle such a situation, none of them good. And if the level of its national commitments remain the same, the Navy can only stretch its forces thinner to handle them -- pulling the second carrier out of the Mediterranean or the third carrier out of WestPac, forcing the task groups to stay out on the "line" for ever-lengthening periods, cutting the short training deployments to Guantanamo or Roosevelt Roads, etc. There is no easy answer to this problem of an overcommitted Fleet.

If one cannot provide a significant number of additional ships, one can make the available ships more useful by providing a certain portion of them with the capability for relatively rapid conversion to alternative weapon and sensor configurations. Provision of alternative weapon and sensor suites for mounting on existing ships of destroyer and frigate size could serve to maximize Navy resources toward particular short-notice AAW, AUSW OR ASW missions. This would enable a

certain portion of a particular fleet's ships to be rapidly configured for the task at hand, thereby reducing the need for unexpected vessel drawdowns from the forces of other fleets.

Utilizing Ballistic Missile Defense

Since the United States is still not very far along in its progress towards President Reagan's vision of strategic defense, it is difficult to postulate the existence, a quarter century hence, of even close-to-comprehensive strategic defenses. Nonetheless, defensive technologies now in the process of being demonstrated offer the promise of providing near-term defense capabilities against constrained ballistic missile threats.

Given the Soviet Union's continuing interest in long-range theater ballistic missile systems, such as the SS-20, and its (postulated) expectation of using some portion of its ICBM force for anti-carrier attacks, it is not improbable that the Navy in the 2000-2010 period would see a definite value in having some form of airborne BMD providing top cover over its forward-deployed forces. Such coverage might be provided by land-based aircraft staging out of bases situated in the region where the fleet was operating or perhaps, though less likely, because of carrier air wing requirements and the reduced size of the aircraft available for this task, by carrier aircraft operating with the task force.

In either case, while the protection offered likely would be fairly limited (i.e., not capable of defending against sustained ballistic missile barrages against the fleet), it would be of sufficient effect to deny the Soviet Union a quick easy knockout of U.S. forward-deployed naval forces, while providing the forces attacked with sufficient protection and warning to deploy for offensive action. Such a limited BMD system would also serve to protect the fleet from the type of limited nuclear ballistic missile threat which could be posed by third-rank nuclear powers during this period.

Obviously, the potential available in airborne BMD systems would have to be thoroughly explored in the coming years in order to determine the feasibility of this concept for providing fleet defense.

Conclusion

The U.S. Navy in the 2000-2010 period will continue to have a vital role to play in maintaining the security of the United States. Though its missions, in the larger sense, will not have changed very much, the way in which it performs these missions is very likely to have changed in a significant way.

The challenge for the Navy in the coming twenty-five years will be retain an effective doctrine for pursuing its myriad responsibilities, in an era which (hopefully) will not provide sufficient wartime experience for testing the ultimate validity of this doctrine. It will not be enough under these circumstances to rely on purely traditional approaches to the

problem. The value of U.S. maritime power will have to be affirmed anew in the light of new, emerging technologies and tactics.

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